

Commonwealth of Kentucky
Division for Air Quality
PERMIT STATEMENT OF BASIS

Title V Draft General Permit No. ***G-97-001***
NATURAL GAS TRANSMISSION STATIONS AND PROCESSING PLANTS

SOURCE DESCRIPTION:

This General Permit is being written to include all Title V Major Source Natural Gas Transmission Stations and Processing Plants in the Commonwealth of Kentucky. A general permit was chosen because of the vast similarities between these stations, the relatively few applicable requirements for any given location and the ease with which revisions and renewals can be made to the permit itself.

A Natural Gas Transmission Station, for the purposes of this General Permit, receives natural gas via pipeline or from any storage facility and compresses, or transmits, the natural gas for transport to another location via pipeline.

A Natural Gas Processing Plant, for the purposes of this General Permit, receives natural gas from natural gas fields, pipelines or from any storage facility and either extracts natural gas liquids from field gas, or fractionates mixed natural gas liquids to natural gas products, or both.

COMMENTS:

I. Type of control and efficiency

There are several control schemes and options for the equipment listed below (some are included) but for the most part, natural gas combustion at the Transmission Stations is uncontrolled and relies on good maintenance and operations to minimize environmental impact. Emissions at the Processing Plants are more closely regulated by Subpart KKK and LLL with specific requirements given depending on the type of equipment.

A. Natural Gas Transmission Stations

1. Indirect Heat Exchangers: afterburners
2. Reciprocating Compressors: catalytic converters, afterburners
3. Standby Generators: afterburners
4. Turbines: afterburners
5. Glycol Dehydrators: none
6. Storage Tanks: tank seals, etc.

B. Natural Gas Processing Plants

1. Closed Vent Systems
2. Flares (conversion of H₂S to SO₂)

II. Emission factors

Emission factors were obtained from the Gas Research Institute where available, and from AP-42 otherwise.

III. Applicable regulations

A. Natural Gas Transmission Stations

1. Indirect Heat Exchangers: 401 KAR 59:015
401 KAR 61:015
 2. Reciprocating Compressors: none
 3. Standby Generators: none
 4. Turbines: 401 KAR 60:330 (40 CFR Subpart GG)
 5. Glycol Dehydrators: none
 6. Storage Tanks: 401 KAR 59:050
401 KAR 59:485 (40 CFR Subpart Kb)
401 KAR 61:050
- B. Natural Gas Processing Plants: 401 KAR 60:630 (40 CFR Subpart KKK)
401 KAR 60:640 (40 CFR Subpart LLL)

IV. Specific determinations

A. Temporary compressors:

Specific provisions have been made for the use of temporary compressors during emergency incidents (refer to the General Permit Section F (f)(4)).

B. RACT/BACT determination (Kentucky Air Toxics):

If emissions of any air toxic pollutants exceed adjusted significant levels and are subject to either RACT or BACT, the source must acquire and follow a routine operation and maintenance program to ensure optimum equipment performance.